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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/930,597

08/15/2001

Marc Schaub

RSTN-005

1776

7590

07/21/2005

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EXAMINER

FERRIS, DERRICK W

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,597

Applicant(s)

SCHAUB, MARC

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6, 8-26, 30-35 and 39-41 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 7, 27-29 and 36-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 1-2, 5-6, 8-9, 11-20, 22-26, 30, 32-35, 39 and 40** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,567,417 B2 to *Kalkunte et al.* ("*Kalkunte*").

As to **claim 1**, see e.g., figure 10 of *Kalkunte* which teaches writing packets into a shared memory as e.g., writing packets in Packet Pool (i.e., FIFO memory) from a corresponding ingress port. The packets are saved in a link list format, see e.g., column 11, lines 54-67 and column 16, lines 30-38. An order is also preserved since information for each packet is stored in transaction queues which make up a link list array, see e.g., column 18, lines 47-63. As the link list stores time stamp information, an oldest packet is identified for an output link that is available for

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packet transmission, see e.g., column 11. With respect to the further limitation, dispatching, to the respective available output link, even if said identified oldest packet is preceded by an older packet that is intended for an unavailable output link, see e.g., head-of-link blocking at column 12, lines 46-67. In particular, the oldest packet is dropped when the time expires using the time stamp such that the next available packet is serviced meeting the above limitation. For the purpose the rejection, examiner notes that all the packets serviced can have the same priority.

As to **claim 2**, the NEXT pointer are the pointers stored in Transaction Queues (XQ), see e.g., column 11, lines 1-10.

As to **claim 5**, the HEAD pointer is the NEXT pointer that is at the end of the FIFO Transaction Queue.

As to **claim 6**, the Transaction Queue (XQ) is serviced in order based on read cycle, where the HEAD pointer points to the next packet in memory.

As to **claims 8-9**, the availability of an output port is based on the HOL blocking which is done when servicing a packet.

As to **claim 11**, packets can be variable length, see e.g., column 10, lines 52-54.

As to **claim 12**, see similar rejection to claim 1.

As to **claim 13**, see similar rejection to claim 2.

As to **claim 14**, see similar rejection to claim 3.

As to **claim 15**, see similar rejection to claim 4.

As to **claim 16**, see similar rejection to claim 5.

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As to **claim 17**, see similar rejection to claim 6.

As to **claim 18**, see similar rejection to claim 7.

As to **claim 19**, see similar rejection to claim 8.

As to **claim 20**, see similar rejection to claim 9.

As to **claim 22**, see similar rejection to claim 11.

As to **claim 23**, see similar rejection to claim 1. In addition, the packet serviced first is placed in a FIFO queue thus ensuring that the oldest packet is serviced first. The availability is further determined based on HOL blocking.

As to **claim 24**, the oldest packet that is intended for an available link is dispatched in the time expires for the oldest packet in the Transaction Queue (XQ) based on the time stamp for the packet.

As to **claim 25**, see similar rejection to claim 2.

As to **claim 26**, see similar rejection to claim 5.

As to **claim 30**, see similar rejection to claim 9.

As to **claim 32**, see similar rejection to claim 23.

As to **claim 33**, see similar rejection to claim 24.

As to **claim 34**, see similar rejection to claim 25.

As to **claim 35**, see similar rejection to claim 26.

As to **claim 39**, see similar rejection to claim 30.

As to **claim 40**, see similar rejection to claim 30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 10, 21, 31, and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,567,417 B2 to *Kalkunte et al.* ("*Kalkunte*") in view of U.S. Patent Application No. 2002/0124149 A1 to *Ni et al.* ("*Ni*").

As such to **claim 10**, *Kalkunte* discloses the limitations in the base claim.

Kalkunte is silent or deficient to the further limitation further including dispatching *multiple* packets in the *same* dispatch cycle if there are multiple packets that are intended for available output ports.

Ni teaches the further recited limitation above at e.g., in figure 3a step 540.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Kalkunte* by clarifying that it is known in the art to service multiple packets in a same dispatch cycle.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be for optimization and in particular to process packets that are greater than a preset size. In particular, *Ni* cures the above-cited deficiency by providing a motivation found at e.g., step 550 in figure 3a. Second, there would be a reasonable expectation of success since both references teach processing packets using linked-lists. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 21, 31, and 41**, see similar rejection to claim 10.

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Allowable Subject Matter

5. **Claims 3, 4, 7, 27, 28, 29, 36, 37 and 38** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

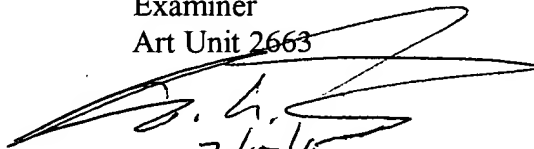
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DWF

Derrick W. Ferris
Examiner
Art Unit 2663

7/10/06